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Foreign Agriculture

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WASHINGTON, D. C.

FEBRUARY
1953



VILLAGE PEOPLE
OF PAKISTAN

Foreign Agriculture

Vol. XVII

FEBRUARY 1953

No. 2

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FRONT COVER

Village People of Pakistan

The problem of food and people described in the leading article in this issue is of special concern to Far Eastern countries like Pakistan; there, the population increases even faster than it does in the United States, where 18 people have been born every 5 minutes during the past decade. (Photo courtesy of Department of Agriculture, East Bengal, Pakistan.)

BACK COVER

World's Approximate Cultivated Land Area

More than 92 percent of the world's land is not cultivated because some of it is in forests and some of it is covered by jungle or is too cold, too dry, or too mountainous.

Credit for photos is given as follows: pp. 33, 35, Technical Cooperation Administration, Department of State; pp. 38-39, Graham Quate.

NEWS NOTES

Hybrid Corn Seed Trials in India

Results of experimental plantings of American hybrid corn varieties in India during the past year were extremely promising. This corn has been introduced since 1950 through a four-way cooperation between the United States Department of Agriculture, the Food and Agriculture Organization, the Technical Cooperation Administration, and the American Seed Trade Association. The research work has been performed in India by the Indian Agricultural Research Institute.

Numerous varieties were grown on test plots at 14 locations, representing most of the major agricultural and climatic areas of India. At least 25, and in some instances more than 50, varieties were tested in each location. In every instance some of the United States varieties outyielded all local varieties tested.

Development and use of hybrid varieties best suited to the corn growing areas of India offer interesting possibilities for increasing the total output of corn. Present yields for that country are low, averaging somewhat less than one-third of the United States yields in recent years—9-10 bushels per acre in contrast to the high United States yields of 35-40 bushels per acre.

Of the numerous varieties tried, different varieties stood first in yielding ability at different locations. However, a few stand out as high-yielding under varied conditions in India: over a range of 14 locations, Dixie 22 was among the top 5 at 11 locations, Texas 26 at 9 locations, Dixie 33 at 7 locations, Dixie 11 at 6 locations, and United States 523 at 4 locations.

FOREIGN AGRICULTURE

ALICE FRAY NELSON, EDITOR

A monthly publication of the Office of Foreign Agricultural Relations of the United States Department of Agriculture, Washington, D. C. The matter contained herein is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business. The printing of this publication has been approved by the Director of the Bureau of the Budget (November 1, 1950). Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 15 cents per copy, or by subscription at the rate of \$1.50 per year, domestic; \$2.00 per year, foreign. Postage stamps will not be accepted in payment.

How Many People Can The Earth Feed?

by R. G. HAINSWORTH



During the past half century in the United States, population has more than doubled. Yet, only 10 percent more land has been put into crops. Nevertheless, Americans are eating better today than they did 50 years ago, and there are large surpluses of food for export. Increase in farming efficiency is what has made it possible for agricultural production to outpace population growth in the United States.

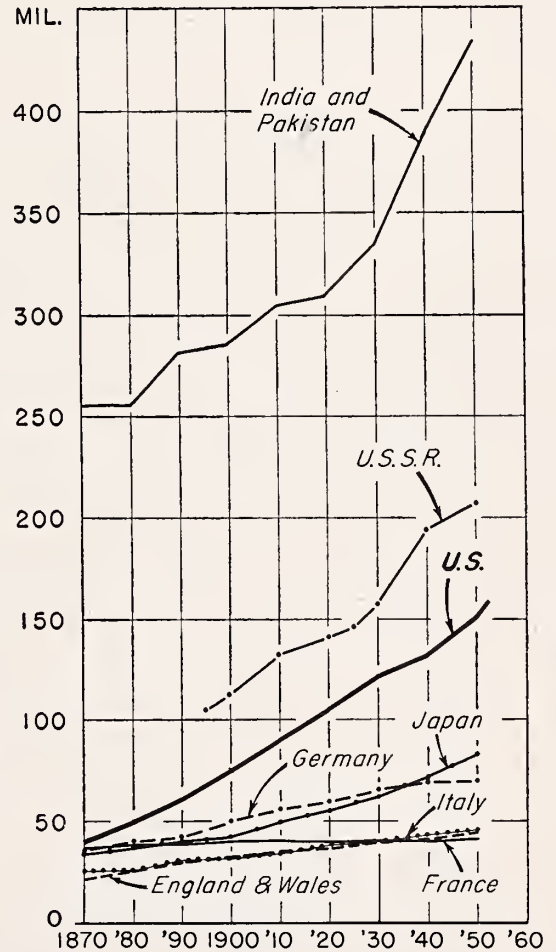
This fact is an encouraging one for the world, for population has been increasing in other countries, too, often at a rate that has exceeded food production increases.

Recent Expansion of Population

Since the beginning of the nineteenth century, world population has increased about 165 percent. In that time the number of European peoples has increased tenfold. Today, nearly a third of all the people in the world are of European origin; in 1800 the figure was less than an eighth. More than two-thirds of the English-speaking people now live in North America; only one-fifth of them lived there in 1800. This growth in Europe and America began with the Industrial Revolution, when the applications of mechanical power increased the production of manufactured goods and so led to an increase in the population of the industrial areas. Increased food demands by the rising populations were first met by intense cultivation of the land. But, by the "hungry forties" of the last century, that effort was not providing enough food and thousands of families emigrated to the New World. Then, fiscal barriers that had hindered the free importation of food were removed and the population of Europe began to grow again. Great Britain is an excellent example of a country whose population multiplied on an imported food supply.

Mr. Hainsworth is Economic Geographer, Division of Foreign Agricultural Information, OFAR.

PATTERN OF POPULATION CHANGE
1870-1950



U.S.D.A.

NEG. 1960

O.F.A.R.

Germany and France are the only countries shown on this chart that have not had a steady growth in population since 1870. In nearly every decade, population in the United States has grown more rapidly than it has in almost any other country. The increase in our population from 1950 to 1952 greatly exceeded the relative rate of increase of all countries during the period 1870-1952.

During the past decade, population has multiplied particularly rapidly. Every minute of every day, 32.6 persons have been added to the world's population. In that time the population in the United States has increased by more than 5,200 persons a day—about 3.6 a minute. For the year just passed—October 1951 to October 1952—the rate of increase in our country was 4.4 a minute. The number of inhabitants in Far Eastern countries has grown even more rapidly in this decade. In the small country of Japan, for example, there are nearly 3,000 new mouths to feed each day—about a million a year. And India has added more than 50 million people to world population figures in the decade.

TABLE 1.—*Growth of world population, 1650–1950*
[In millions]

Continent	1650	1750	1800	1850	1900	1933	1950
Europe.....	100	140	187	266	401	519	557
North America...	1	1	6	26	81	137	190
Central and South America...	12	11	19	33	63	125	137
Oceania.....	2	2	2	2	6	10	13
Africa.....	100	95	90	95	120	145	198
Asia.....	330	479	602	749	937	1,121	1,305
World total.....	545	728	906	1,171	1,608	2,057	2,400

Source: 1650-1933 from League of Nations, *Statesman's Yearbook* 1941-42; 1950 estimates by author from various sources.

TABLE 2.—*Total land area, cultivated land, and population, by continent or country, percentage of world total*

Continent or country	Percentage of—		
	World land area	World cultivated land	World population
Asia (excluding USSR)	18.6	32.5	52.9
North America	17.3	22.7	9.0
Soviet Union.....	16.1	16.8	8.2
Europe (excluding USSR)	3.7	14.9	16.6
Central and South America.....	13.2	6.5	4.5
Africa	24.1	4.8	8.3
Oceania.....	7.0	1.8	.5
Total.....	100.0	100.0	100.0

Distribution of Population

The United Nations estimates that on the earth's 55 million square miles of land there were 2,400 million persons in 1950. About 10 million square miles of the land area is covered by ice and snow or is too wet or too dry to be habitable, and about half of the remaining 45 million square miles is very sparsely settled. This leaves about 22.5 million square miles to support most of the human population.

Nearly 95 percent of the earth's inhabitants live in the so-called land, or people's, hemisphere, whose center is at 50° N. and 0° longitude. This hemisphere contains more than six-sevenths of the earth's land and yet is more than half water.

From a point of view of population developments the areas of the world can be divided into three groups:

1. Areas that have slowly increasing populations. About a fifth of mankind are in these areas—chiefly in Western Europe, North America, and Australia-New Zealand.

2. Areas that have declining birth and death rates, and yet have increasing populations. Another fifth of the world's population are in these areas, mainly those of Eastern and Southern Europe, the Soviet Union, and Japan (plus certain classes of the population in some Asiatic, African, and Latin American countries).

3. Areas that have not as yet experienced a decline in birth rates and in which the introduction of the cheaper, more easily applied mass mortality controls has lowered the death rates sufficiently to result in large measure of population growth. The remaining three-fifths of mankind, mainly the inhabitants of Asia, Africa, and Latin America, live in this area.

Distribution of Cultivated Land

The cultivated land (2.5 billion acres) amounts to about 7.7 percent of the earth's land area (32.6 billion acres not including the Antarctic and the arms of the oceans and seas extending inland). To state it another way, there is 1 acre of cultivated land for every person in the world.

The two countries having the largest areas of cultivated land are the United States, with 18.2 percent, and the Soviet Union, with 16.9 percent.

The United States not only has the largest area of cultivated land in the world, but also has ex-



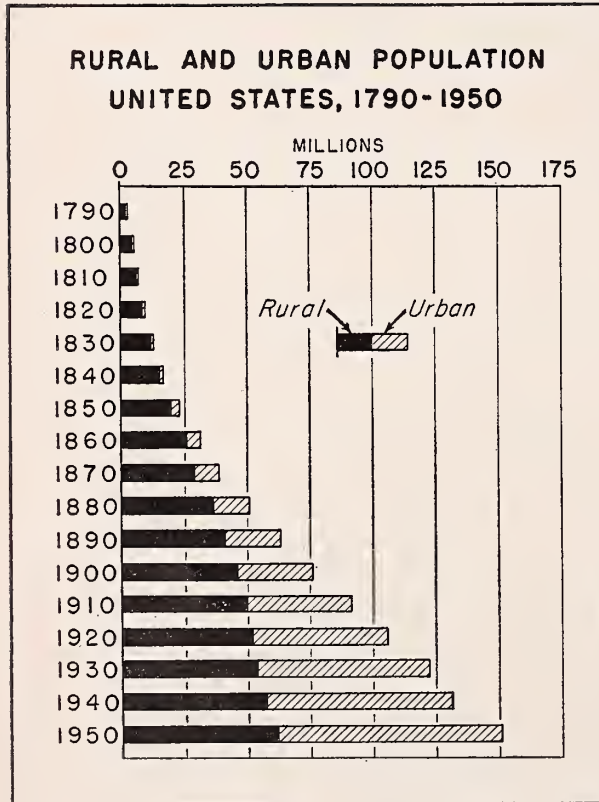
U.S. DEPARTMENT OF AGRICULTURE

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The world's 2,400 million people occupy less than half of the earth's land surface; most of the rest of the land is covered by ice and snow, high mountains, or deserts. The areas of densest population are all in the Northern Hemisphere. Here, there are three main population centers—the highly developed industrial regions of Western Europe and of eastern United States and the intensively cultivated farming regions of eastern and southern Asia.

tensive areas of permanent meadows, pastures, and range lands, which are used for grazing livestock. The abundant supply of products derived from the livestock industry, plus the crops produced on the cultivated land, gives the United States a well-balanced agriculture, which only a few countries are fortunate enough to have. Fifty years ago the cultivated land per capita in the United States was nearly 5.4 acres; today it is about 3 acres, yet the food produced on this smaller acreage feeds twice the number of people at home and provides large exports.

The 15 countries having more than 75 percent of the total cultivated land also have about two-thirds of the population of the world. Canada has the largest number of acres per capita, about 6.5, and China has the smallest, only 0.39 acre. Canada has 3.6 percent of its land cultivated and a small population (13,845,000); China (22 provinces)¹ has 12.4 percent of its land cultivated and a very heavy population (463,500,000).



U.S.D.A.

NEG. 1959

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United States population was 30 times larger in 1950 than in 1800; total world population was only 2.65 times as large. In 1800 the United States had 5 million people, 94 percent of whom were rural; in 1950, it had more than 150 million people, only 41 percent of whom lived in rural communities.

TABLE 3.—Distribution of cultivated land among the 15 countries having more than 75 percent of the world's total cultivated land

Country	Acres cultivated	Cultivated land as a percentage of total land	Cultivated land per capita	Percentage of world cultivated land
	Thousands	Percent	Acres	Percent
United States	454,983	23.5	2.9	18.2
Soviet Union	423,109	7.6	2.04	16.9
India	305,959	38.0	.85	12.2
China ¹	180,951	12.4	.39	7.2
Canada	89,843	3.6	6.46	3.6
Argentina	74,130	10.7	4.31	2.9
France	52,212	38.5	1.24	2.1
Pakistan	51,199	2.3	.7	2.0
Spain	47,381	37.8	1.67	1.9
Brazil	46,541	2.2	.9	1.8
Poland	41,572	52.8	.99	1.6
Iran	41,413	10.4	2.2	1.6
Italy	38,098	51.6	.8	1.5
Germany	34,087	37.0	.49	1.4
Australia	32,031	1.7	3.9	1.3
Total	1,913,509			76.3

¹ 22 Provinces; excludes Sinkiang, Kwangsi, 9 Provinces of Manchuria, Formosa, and Tibet.

Physical Factors Limiting Productive Land

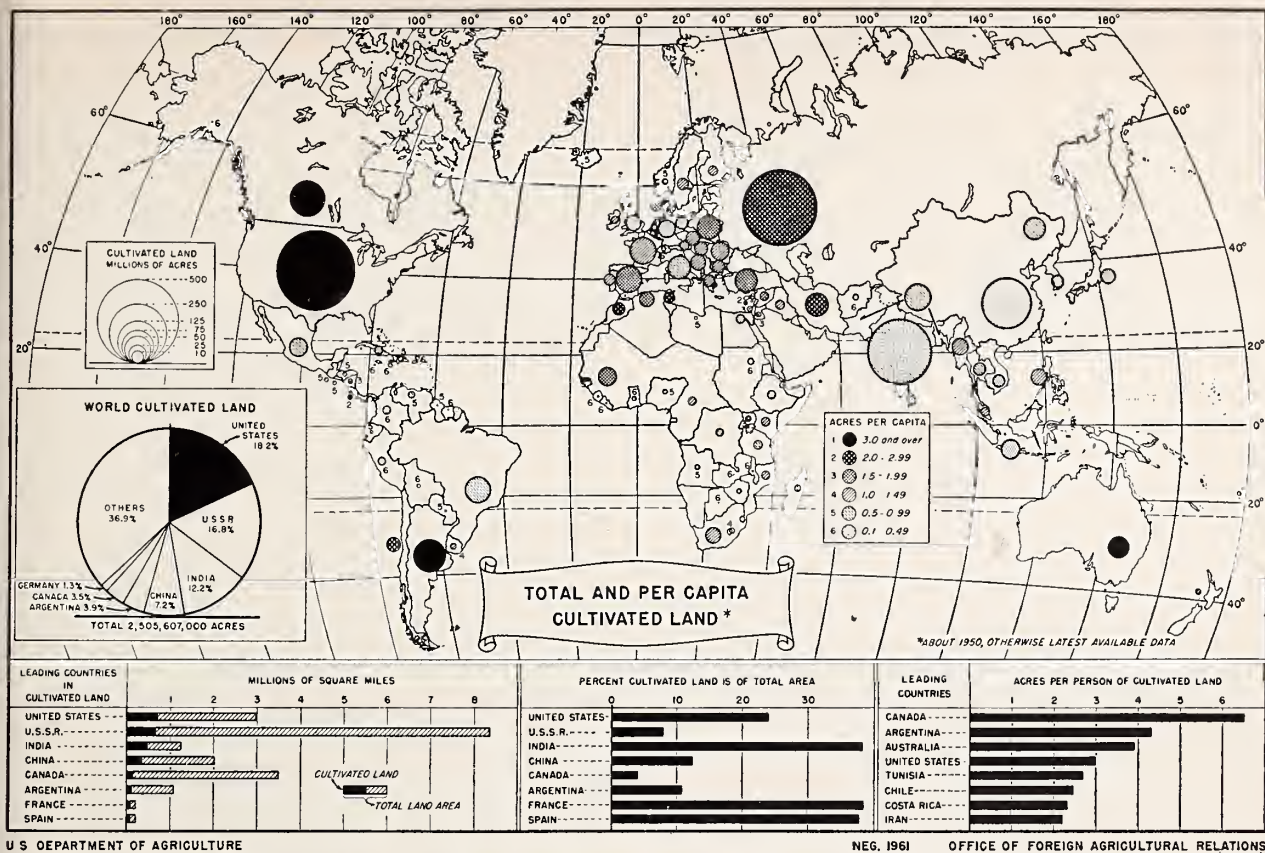
The topography of the world's land area can be divided into four principal classes of land forms:

	Percent
Plains	41
Plateaus	33
Hills	14
Mountains	12

If topography alone is considered, about two-thirds of the land area of the world is adapted to agriculture: 95 percent of the plains, 75 percent of the plateaus, 25 percent of the hills, and 5 percent of the mountains. But, when climate and soils are also considered, only about one-fourth of the land area can be used for agricultural purposes.

Most farming is carried on at elevations below 1,500 feet, on the expansive plains and flood plains and on the lower plateaus and hill lands. Not all plains are suitable for crop production, however; some are too swampy, some have poor soils, others are too dry, too wet, too cold, etc.

¹ Excludes Sinkiang, Kwangsi, nine Provinces of Manchuria, Formosa, and Tibet.



The cultivated lands of the world are not evenly distributed among the countries and peoples of the world. The United States has nearly one-fifth of the cultivated land and slightly less than 6.5 percent of the world's population; in other words, it has about 3 acres of cultivated land per person. China has about 7 percent of the world's cultivated land—less than one-half acre per person. (The size of the circles on the map indicates the amount of cultivated land; and the surface shadings of the circles, the cultivated land per capita.)

These plains may have soils of high natural fertility and still not be adapted to agriculture, for temperature and moisture conditions must also be suitable for the growth of crops.

When reliability of rainfall is taken into account, only about one-third of all land is adapted to food production. This statement is based on a requirement of 15 inches of rainfall annually, however, and crops are grown in some areas with less rainfall. Sometimes even 10 inches is satisfactory, when most of the rain falls in the growing season. On the other hand, as much as a 40-inch annual rainfall is generally required in the Tropics, where evaporation is high.

Temperatures also limit the areas that can be used for crops. Where the temperature is near the freezing point, all plant activity is extremely low. Dr. J. B. Kincer suggests the average "zero of vital temperate point" is 6° C., or 42.8° F. This point varies, of course, with different plants in accordance

with their temperature requirements. Vital temperature of several crops are as follows:

	Degrees F.
Spring wheat	37 to 40
Oats	43
Potatoes	45
Corn	54 to 57
Cotton	62 to 64

Many areas of the world with good soil and ample moisture cannot produce these major farm crops, because, even between the last killing frost in spring and the first killing frost in fall, temperatures often drop below the danger points for the crops.

Increased Areas of Cultivation

Here and there in the world—in the Amazon Basin and in parts of Burma, New Guinea, and Sumatra, for example—there is still land available for farming. It has not been fully utilized, because there are not enough people in the areas to do the

type of work necessary. Additional new lands in much of the world can also be brought into agricultural production by means of irrigation and drainage systems.

Irrigated land now supports about 10 percent of the population of the world; an estimated 200 million acres of land are irrigated and another 200 million acres could be irrigated. Irrigation projects are planned or underway in China that will bring water to 89.5 million acres; in India for 42 million acres; in the United States for 26 million acres; and in Pakistan for 20 million acres.

Much progress has been made in irrigation in the last half century. In Egypt, for instance, the system of irrigation has been changed from basin irrigation, or a one-crop agriculture, to perennial irrigation, under which several crops can be grown each year on the same area of land. The system has been developed extensively with great storage reservoirs and dams, of which the Aswan Dam is the leading example. Long-time storage of water in Lake Victoria is also a possibility. India, too, is improving and expanding its irrigation systems. It plans to increase irrigation 150 percent as soon as possible. Almost every Province and State in India has areas in which seasonal rainfall is uncertain; by harnessing water resources, these areas can be made more steadily productive.

Another way in which the crop-bearing areas of the world may be increased is illustrated by the northward extension of the Wheat Belt in Eurasia and North America during the past 50 years. This extension has been made possible by the use of faster-growing and earlier-ripening varieties of wheat.

Population Capacity and Food Production

Agricultural production per acre has been declining in many countries, such as Australia, Argentina, Canada, and even countries as new as South Africa and Venezuela. Some once highly productive areas like those of North Africa, which was the granary of the Roman Empire, the valleys of the Tigris and the Euphrates, and vast areas of India and China have ceased to grow sufficient food for the local population or have been turned virtually into deserts.

What has happened in these ancient lands is now happening in the United States; the only difference is that it is occurring faster in the United States. Already about one-fourth of the good agricultural land of the United States has been destroyed by

erosion and poor agricultural practices, which deplete the soil and lower production per acre. Meanwhile the United States population continues to increase, as do populations in the rest of the world. Conservation of our resources is a "must."

In addition to increasing food output by using the land wisely, it is possible to add to it by producing concentrated foods. I mean by that, high-protein foods or food pellets can be produced by processing wood and other crude products into food for people and livestock.

The science of hydroponics (the culture of plants in mineral saturated solutions) is a widely discussed means of adding to world food supplies, but it has not yet proved economically feasible because it is costly and limited to a comparatively small range of vegetables.

Increased production is not the only answer to the problem of feeding the world's growing population. Other answers are concerned with distribution and waste, high prices and artificially created "surpluses."

In considering how many people the world's resources can support, we know, of course, that the number depends on living standards. Still, we may make some general calculations based on the following assumptions:

1. We may assume that farming methods will stay as they are today and that the only increase in food supplies will be the result of raising the standards of cultivation in backward areas, using improved strains of food plants and animals, and making full use of all the cultivated land. On this assumption, we may calculate the world's population at 6,500 million people—about $2\frac{3}{4}$ times the present number.

2. We may make the additional assumption that the pressure of increasing populations and falling living standards will compel mankind to utilize all the cultivable land in the Hot Belt, as fully at least as the small areas now in use are utilized. At this rate, the 4,000,000 square miles that would be added to the world's cultivated land area might be capable of producing food for a population as dense as that of Java, where there are 42,000,000 people on 50,000 square miles of land, less than 60 percent of which is cultivable. If we take France as our basis for the mid-latitude lands and Java for the Hot Belt, the possible population of the world becomes 9,600 million.

3. We may guess at more or less speculative advances in the development of science applied to

food production. And we may consider the statements of the late Prince P. A. Kropoken, an eminent geographer, who said there are no limits to the productivity of the land and claimed that the food production of England and other countries could be easily doubled by the application of intensive methods of cultivation at higher costs. It is true that agricultural productivity can be increased by such expenditures and by scientific investigation. Although many optimistic forecasts have been made as to the limits of such productivity, I know of no data sufficient to justify an intelligent estimate of the limits.

These calculations indicate that the world as a whole is capable of supporting a population much more numerous than the population of today. The immediate problems of overpopulation are limited to a few areas; and the present day "pressure of population" is not against the limited resources of the earth but against the various barriers, natural and artificial, that hinder access to those resources.

World potentiality of agricultural production measured by a strictly economic yardstick, which demands immediate returns on new developments, is no doubt rather limited. But when favorable and corrected physical factors are coupled with long-time financing the potentiality is great. Future areas of production will have to be developed at

great costs in many cases, but other factors will outweigh these costs, as the pressure grows for new land to be cultivated.

The present cultivated-crop and grazing areas of the world have a long way to go before the greatest yields per acre will have been obtained. Soil conservation and improvement, commercial fertilizers and manuring, the best land utilization, proper seed, and suitable use of mechanization—all can contribute to increased production from presently cropped and grazed land areas.

Further development of agricultural technology, based on modern science and its application, offers one of the really great opportunities to improve living conditions for the world's population and to create an atmosphere for world peace.

The size and natural resources of the earth are more or less definite and limited and ensure that its human population cannot increase indefinitely. However, after analyzing the various assumptions under which we might estimate the world population-capacity, and considering our present ability to produce food and the improvements being made in its production, we may well expect the world to support nearly three times its present population in reasonable comfort. But, if the present rates of increase are maintained, that number will probably be reached within a century.

International Conferences

Following are some international conferences of agricultural significance that are scheduled for 1953.

<i>Organization</i>	<i>Place</i>	<i>Date</i>
Biological Sciences, General Assembly of the International Union (11th).	Europe.....	(1)
Botanical Congress, South American (3rd).	Bogota	(1)
Coffee Congress, World; and Coffee Culture Exposition, International.	Brazil.....	Dec. 11.
Cotton Advisory Committee, International (12th Plenary).	Wash.....	May.
Dairy Congress, International (13th)....	The Hague....	June 22.
FAO Conference (7th).....	Rome.....	Nov.
FAO Council (17th).....	Rome.....	June 15.
FAO Emergency Food Reserve, Meeting of Group of Experts on.	Rome.....	Early Feb.
FAO Forestry Congress, World (4th)....	New Delhi....	Fall.
FAO Latin American Seminar on Land Problems.	Brazil.....	(1)

Fisheries, International Commission for Northwest Atlantic (3rd).	New Haven....	May.
GATT	Geneva	Sept. 17.
Genetics, International Congress on (9th).	Bellagio	Aug. 4.
Home Economics, International Congress on (8th).	Edinburgh....	Aug. 12.
Horticultural Congress and Exposition.	Hamburg	May.
Rubber Study Group, International (10th).	Copenhagen.	Mar.
Seed Testing Association, International (10th).	Dublin	May 25.
Soil Mechanics and Foundation Engineering, International Conference on (3rd).	Zurich and Lausanne.	Aug. 16.
Sugar Conference, International, UN....	London	July.
Veterinary Congress, International (15th).	Stockholm ...	Aug. 9.
Vineyards and Wine, International Congress on (7th).	Rome	(1)
Wheat Council, International (11th)....	Wash.....	Feb. 2.

¹ Undetermined.

Gatt—Seventh Session

By ROBERT B. SCHWENGER

At Geneva, Switzerland, for five intensive weeks late in the fall, representatives of more than 30 countries aired their trade grievances against one another and reached friendly solutions. The conduct and atmosphere of this meeting were in sharp contrast to those of similar prewar conferences, when trade restriction and retaliation often embittered relations between even the most friendly countries.

The occasion was the Seventh Session of the Contracting Parties of the General Agreement on Tariffs and Trade,¹ the so-called GATT, which met October 2 to November 11. GATT is made up of a series of agreements for the reciprocal reduction of tariffs, designed to expand international trade on a mutually advantageous, nondiscriminatory basis. Each agreement specifies the tariffs to be reduced (or bound against any increase). All of the agreements have the same provisions regarding quotas, subsidies, customs formalities, exchange control, escape arrangements, state trading, and other general matters that can impair the advantages of a tariff reduction.

The Contracting Parties meet from time to time (about once a year) to deal with problems arising under GATT. Within almost every participating country, objections are occasionally raised to one or more of the country's obligations under GATT. Objectors want to limit imports of a GATT commodity, discriminate in favor of a particular country, raise a tariff, or intervene in some other way to interfere with trade under GATT. Frequently there are major propaganda campaigns against participation in GATT. But no country having substantial international trade has been willing to give up the benefits of GATT in order to free itself from the obligations. Instead, each country brings its problems to a session of the Contracting Parties and seeks an agreed remedy.

A number of the problems before the recent

Seventh Session are of direct interest to United States agriculture.² Among them are import restrictions (and discrimination) for balance-of-payment purposes, United States restrictions on dairy products, its increased tariff on dried figs, its export subsidy on sultana raisins, Belgian restrictions on imports from dollar countries, and Cuban tariffs on rice imports.

Balance-of-Payment Consultations

The original GATT tariff reductions were negotiated in 1947, when the economies of many of the participating countries were disrupted by war. These countries could not produce for export in a normal way and they needed unusually large imports. Their international payments were too far out of balance to be adjusted by normal market forces; the strain on their standards of living and internal order would have been too great. Most of them had maintained their wartime government control of trade. Under the provisions of GATT, they were permitted to restrict the quantity of their imports during the period of their extraordinary balance-of-payment difficulties.

At the same time, in order not to unduly impair the value to other GATT countries of their tariff reductions, they undertook not to use these quantitative restrictions in a more protective or discriminatory way than was necessary to balance their international payments; they also undertook to do what they could to rid themselves of the balance-of-payments difficulties. Provision was made for consultation with the GATT Contracting Parties regarding the manner in which these undertakings were carried out.

The first such consultation began at the Seventh Session with the following countries: Australia, Ceylon, France, Italy, the Netherlands, Pakistan, and the United Kingdom. The consultations are to take place annually from now on and are expected to include all countries that continue to impair the value of their concessions by balance-of-payments import restrictions. In the consultations the countries (including the United States) whose trade is suffering from the import controls maintained for balance-of-payment reasons discussed with the restricting countries their methods of determining the quantities of imports to be admitted. They asked questions designed to bring out the need for minimizing the protective and discriminatory effects of the restrictions, and for

¹ The Contracting Parties, i.e., the countries participating in GATT, are Australia, Austria, Belgium, Brazil, Burma, Canada, Ceylon, Chile, Cuba, Czechoslovakia, Denmark, Dominican Republic, Finland, France, German Federal Republic, Greece, Haiti, India, Indonesia, Italy, Liberia, Luxembourg, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Peru, Southern Rhodesia, Sweden, Turkey, Union of South Africa, United Kingdom, United States.

² The Department of Agriculture was represented on the United States Delegation to the Session by Robert B. Schwenger, OFAR, and William O. Shofner, P.M.A.

internal measures to restrain inflation if the restricting countries are to rid themselves of extraordinary balance-of-payments difficulties; the hardship caused to exporting groups in the questioning countries by the more extreme restrictions; the danger that excessive restriction may aggravate such difficulties by making exportation to dollar countries more difficult; and similar considerations.

During the coming year, in anticipation of the next consultations, the importing countries will take these matters into full consideration in deciding on particular restrictions.

Belgian Restrictions

In the case of Belgium, the United States complained that certain import restrictions were damaging American export trade and were not permitted under GATT. Belgium agreed to remove the restrictions, beginning with a substantial relaxation.

U. S. Import Restrictions on Dairy Products

At the Sixth Session of GATT in the fall of 1951, the Contracting Parties had decided that United States import restrictions on a number of products under Section 104 of the Defense Production Act of that year impaired concessions made by the United States on these products in GATT. The Contracting Parties did not at that time, however, authorize compensatory actions by other countries, but chose to await the outcome of the reconsideration of Section 104 then before Congress. At the Seventh Session, Section 104 having been reenacted, the Contracting Parties authorized injured countries to put forward proposals as to compensatory concessions that they might withdraw. The Government of the Netherlands proposed to reduce its duty-free imports of United States flour from 72,000 tons to 57,000 tons. After considering the relationship of this proposal to the estimated loss caused the Netherlands by Section 104 restrictions on cheese, the Contracting Parties authorized the Netherlands to reduce the figure to 60,000 tons. The representatives of Australia and New Zealand indicated that their governments expected to propose withdrawals in the near future, and it was agreed that a special session of the Contracting Parties might be convened to consider such proposals. The compensatory actions were to continue only so long as the United States continued the restrictions in question.

Increased U. S. Tariff on Dried Figs

The United States reduced its import duty on figs under GATT. This past summer, the Tariff Commission found that it was necessary to restore the

duty because of injury to United States producers. In acting on the recommendation, the President stated that the situation would be kept under review with the idea of again lowering the duty when conditions in the United States fig industry permitted. At the Seventh Session, Turkey and Greece stated that their trade had been injured. After studying the matter, the Contracting Parties authorized Turkey to make temporary compensatory increases in duties it had lowered on certain products imported from the United States. Greece, on the other hand, asked the United States to consider making offsetting reductions in the tariffs on other items imported from Greece. A study is now being made to see whether there are additional items of trade on which tariff reductions might be considered. Italy also indicated an interest in the United States fig concession but took no action at the Session.

U. S. Export Subsidy on Sultanas

Greece and Turkey declared that they were being injured by the United States export subsidy on sultana raisins. Discussions of the matter were held during the session, and the United States agreed to consult further with affected countries, although the United States delegation pointed out that their country had not used the subsidy to increase its share of the market or expand its production.

Cuban Rice Imports

Cuba has been interpreting a rice tariff concession made to the United States in GATT in such a way as to introduce uncertainty into the trade and in some years to require double duty for a good deal of United States rice. The two governments undertook to negotiate a settlement, the time for completing the negotiation to expire at the Seventh Session. Since discussions were continuing, the Contracting Parties extended the date to the Eighth Session. Meanwhile, the two governments have come to agreement on an interpretation of the concession, which, it is believed, will be accepted by the other Contracting Parties.

Other Actions

Other actions of more or less direct interest to the United States include the establishment of a procedure for examining Japan's application to participate in GATT, the granting to countries about to start operations under the European Coal and Steel Community (Schuman Plan) the right to lower duties on these products for one another without extending the benefits to the other Contracting Parties, and the extension for 1 year of the term of Sir James Helmore as chairman (nominated by GATT) of the United Nations Interim Coordinating Committee for International Commodity Arrangements (ICCICA).

Mr. Schwenger is Chief, Regional Investigations Branch, OFAR.

Land Ownership in Iran

by FRANKLIN S. HARRIS



Hunger for land is one of the most obvious manifestations of the social and economic conditions that prevail in Iran, as it is in almost all parts of the Orient. Sons of peasant farmers—most of the young men—do not know how to make a living in any way except by tilling the soil; and they have few opportunities to learn, for off-the-farm jobs are much less numerous than the people competing for them.

In populous areas, where the soil is fertile, the competition for land is so great that the acreage available to each farmer tends to grow smaller and smaller, and landowners gain a tremendous bargaining power out of this ever-increasing land hunger.

This hunger is not necessarily a desire for outright ownership, for few peasants who cultivate the land actually own it in this part of the world. If they were required to purchase the land they till, they would be unable to be farmers at all, for they have relatively little capital. They can, however, carry on farming operations under some system of share cropping. The economic condition of a farmer may be judged to a considerable extent by the degree of his independence in matters of rentals, tenures, and ownership.

In scrutinizing the agriculture of Iran for means by which the economic condition of the farmer can be improved and the whole economy of the country thereby made more stable and secure, it has become obvious that the question of land ownership and tenure must be taken into consideration.

The system of land distribution in Iran is the result of a complex interworking of political, social, economic, religious, racial, and climatic forces of a fundamental character over many hundreds of years. One may not approve of the situation that is found, but one cannot disregard the heritage of history nor the effect of these fundamental forces that have created the present systems of land distribution and tenure.

Dr. Harris retired recently from the post of Point Four Country Director for Iran.

Types of Land Ownership in Iran

Some of the agricultural areas of Iran have been in continuous cultivation for thousands of years. During this period, there have been various patterns of tenure and ownership. In some areas the pattern has been more or less stable from generation to generation; in other sections, it has shifted frequently as ownership changed.

Despite the variations, landownership may be classified into four main types: (1) lands owned by relatively large proprietors, (2) state lands, (3) endowment lands, and (4) lands owned by peasant proprietors. It is thought that as much as 70 percent of the total land area falls into the first three categories; probably less than a third is owned by the farmers who cultivate it. These figures must be considered estimates only, for Iran has never had a carefully taken, comprehensive agricultural census.

The large landed proprietors are of two main types: those owning whole villages and those owning shares in several villages. The latter are not clearly distinguished from the genuine peasant proprietors. Under the so-called state lands are included not only the public domain but also the lands that belonged to the former Shah, which are often referred to as crown lands. Part of this land is in various stages of being returned to former owners through legal action. Most of the land, however, is administered as a royal endowment, the income from which goes mostly to the support of certain designated charities.

Recently the present Shah has put into effect a plan under which crown lands are sold to peasants on easy terms.

The endowment lands, other than the royal endowments, are largely owned by the religious shrines, such as those at Meshed and Qum, although there are numerous smaller endowment holdings. The income from these holdings supports some favored charity of the donor.

The land in the first three categories is commonly worked on a share-cropping basis, and the landowner is usually an absentee. In many cases the land is leased to a third party who deals directly with the peasant. The public domain is usually leased out to the highest bidder.

The practice of share cropping is so common in Iran because certain types of farming require large outlays of cash and most Iranian peasants have little working capital. This kind of agriculture, therefore, can only be carried out under a landlord. In Kerman, for example, water must be brought long distances from the mountains to the farms. The water is carried in underground canals, called ghanats, which are expensive to build and to maintain.

Other types of farming in Iran are suited to the financial limitations of the small farmer. The pastoral agriculture of the mountainous area north of Bandar Abbas is one such type. In this area, peasants get their water from the mountain streams, own the land they cultivate, and graze their sheep and cattle on the open mountainsides. In Yezd, a prosperous agricultural section in central Iran, small independent farmers also predominate. There are some large landowners in the area, but most of them live on their farms. Here, field crops are produced, and farmers band together to construct and maintain the ghanats.

Dividing the Income

Rental practices in Iran are as varied as the types of agriculture. In most areas, however, rent is paid in kind, and often the peasant pays the landowner not only part of the crop but other dues as well—a definite amount of clarified fat or firewood, for example.

For many years, attempts have been made to standardize rents and the division of crops. At times, commissions have been set up by the Ministry of Agriculture, the Ministry of Justice, and the Ministry of Interior to study the rental problem. Much local information has been assembled and many proposals have been made, but no laws have been enacted.

The division of profits is a matter of bargaining between the landlord and the peasant. In certain regions—those producing rice, for example—rather uniform rents have been established. In some cases they apply over a rather large area. On the other hand, great variations in rentals are found, depending on all the factors that enter into farming operations, as well as on tradition.



Villagers of Dastgerd, Iran, drive one of their flocks to pasture along a dusty road. Pastoral agriculture is suited to the financial limitations of Iran's small farmers.

When rent is paid in kind, five basic factors are usually taken into consideration in calculating the division of the crop. These factors are land, water, seed, labor, and power. The harvest is divided into five portions, one being assigned to each of these factors. The value given each factor varies, of course, with the type of agriculture. Under dry farming, where irrigation water is not required, the harvest may be divided into three or four portions. But, when the landlord furnishes land and water and possibly seed or power, the crop is often divided equally between the landlord and the farmer. And, with such crops as sugar beets that require a great deal of hand labor, much weight is given to the labor factor. When livestock is used, another element is introduced into the complex situation.

Whether rentals are paid in kind or in cash depends on the crop produced. In such fruit-growing areas as Azerbaijan and Khurasan, rentals are paid in cash—a certain amount per tree—for payment in kind would be inconvenient for both grower and landlord. In practically all parts of the country where grain is the principal crop, the absentee landlord gets a portion of the crop, which he can market when it is most advantageous.

Water is an important factor in calculating the division of the crop in such areas as Kerman, where the water is carried as far as 30 miles in the ghanats.

Difficulty of Changing the System

Since Iran's ownership and tenure systems have been evolved through long years of experience, much difficulty would be encountered in changing them to fit into any so-called land reform plan that would attempt to alter present procedures quickly. The government has at times attempted to transfer landownership to the peasants by decree, but these efforts have not been successful. An example is found in an area in Seistan in the eastern part of Iran.

This area was once considered public domain, various parts of which were rented to tribal leaders, who managed the villages and permitted the peasants who actually tilled the land to retain a portion of the crops. Thus peasants made a contribution directly to the tribal leaders, who in turn contributed part of their income to the government, which was assumed to be the real owner of the land.

Under Reza Shah, in the early 1930's, a new

system supervised by the Ministry of Finance was introduced for this part of Seistan. Under this plan, most of the lands were so distributed that the government dealt directly with the peasants.

In this distribution each peasant was awarded as much land as could profitably be sown with 660 pounds of wheat or barley. This was approximately 10 acres. The new distribution system was in operation for 4 or 5 years, but from the beginning it seemed doomed to failure. The land gradually reverted to the control of the tribal leaders and other powerful landlords.

Some of the reasons for the failure of the plan are as follows:

1. The peasants were not accustomed to managing their own affairs; they had always depended on the landlords for direction. They failed to maintain the irrigation system, for instance, because the individual peasants had never worked out a plan of cooperation among themselves. Before land distribution, the building of dams and the annual cleaning of the canals had been supervised by the tribal leaders. When the land was divided, there was no one to assign tasks to the peasants, and they had no system of their own for cooperation.

2. The individual farmer lacked capital for improvements and living expenses, let alone for buying the land.

3. There was no adequate system for selling the products of the single farmer.

In short, the failure may be attributed to the lack of an adequate system of cooperation.

During the late 1930's, the Ministry of Agriculture made another attempt at land distribution in Seistan. This time the Ministry undertook to allot land to individuals who seemed able to operate it, because they had some capital, experience, etc. The allotment was usually large, consisting of most of a village.

Since these awards were frequently made to outside persons, the tribal leaders were dissatisfied. This discontent led to contention that gradually brought into operation the present system, which is the one that long prevailed. Most of the land is owned by large landlords, including tribal leaders. Very little is now owned by the peasants who till it.

The Future

After examining the complex pattern of land distribution and tenure that exists in Iran, the investigator wonders what might be expected to



Threshing wheat in Iran. Most of the wheat land of Iran is farmed by tenants.

happen in this country that has set itself to improve its national welfare.

In many countries land reform is being attempted on a large scale. Efforts in most cases are being directed toward assisting those who till the soil to become owners, for experience has shown that ownership carries with it a better type of farming and a more stabilized national economy than does a system in which the responsibility of bringing the soil to its highest productivity is divided between an absentee landlord, who is interested mainly in the annual revenue, and a farmer, who because of shifting tenancy does not feel the affection and responsibility for the land he tills that he would feel for land he owned.

Desirable as land ownership may be for the peasant and the country, however, certain difficulties are encountered in bringing this about in Iran. The two greatest difficulties are the shortage of capital on the part of a peasant-farmer and his lack of experience in managing his own farming enterprise. He has been so accustomed to having a landlord furnish money to cover his financial needs and give general direction to his business transactions that he is not prepared financially or psychologically to carry the load of conducting an independent farming operation.

For these reasons, the transfer of the land from the landlord class to the farmer class will require years of education and considerable adjustment in the financial structure. This adjustment might come through cooperatives or other devices that will enable the peasants gradually to build up working capital by setting aside part of their earnings.

In countries such as the United States, with long years of experience in individual ownership of the farms, it is easier to transfer farmers without land from the tenant to the owner class. It is done by making credit available through special land banks or cooperatives. Many difficulties have been encountered in this transfer, however, even under the comparatively favorable conditions that exist here in the United States.

The forward-looking plan of the Shah in which he hopes to aid peasants to become landowners may well be a proving ground for a new economic order among the farming classes of Iran. Certain tribal leaders are also giving consideration to plans for making the lot of their farmers more secure and for raising their standard of living.

Certainly an evolution of a more dynamic rural economy is much to be desired in Iran, and this change can best be accomplished by an evolutionary, unified growth in that direction.

FAO Council Session

By THOMAS E. STREET

World agricultural production increased 2 percent during the past year, according to reports made at a recent meeting of the 18-member Council of the Food and Agriculture Organization of the United Nations. Most of the increased production was in nonfood crops such as fiber, however, and most of it occurred in the more developed areas of the world, such as in North America, rather than in the areas where the need for higher output is greatest. After reviewing the state of food and agriculture, the Council concluded that the tight rice supply situation is the most serious food problem facing the world.

Council members met from November 17 to 29 at FAO's headquarters in Rome to review the Organization's program and budget for 1953, assess the world food situation, approve the progress of FAO's technical assistance program, and consider a number of other problems.

The discussions that were perhaps of widest general interest were those on the food situation in Yugoslavia and on the proposal to establish an international famine emergency reserve.

Food and Feed Problem in Yugoslavia

Because Yugoslavia's food and feed production had been reduced by drought, that country took advantage of the FAO services made available by a resolution adopted by the 1951 Conference session, which asked FAO to keep a close watch on areas in which food shortages were impending, to investigate the magnitude of the food problem, and to determine the aid that might be required. The survey that was made in Yugoslavia was completed in time for the presentation of the report to the Council.

The report, presented by the chief of the mission, Professor M. J. L. Dols of the Netherlands, stated that Yugoslavia will need about \$65 million worth of food and feed imports to ensure its food supply in 1952-53, despite a reduction in average food consumption in Yugoslavia to 2,300 calories and a reduction in livestock numbers.

The mission mentioned that some of the required supplies listed in its report might be available under the tripartite aid program of the United States, the United Kingdom, and France that is already operating in Yugoslavia.

In taking action on this mission report, the

Council had a unique and challenging problem, for the survey was the first one to be conducted since the resolution was passed. How was the situation in Yugoslavia to be defined, for example? It was not a famine that could be made the basis of an emergency appeal to the people of the world. True, total crop output was an estimated 40 percent below average production of the preceding 5 years, but there was no immediate food shortage. The actual shortage is likely to occur in the spring, before the new crop is available. There were many other questions to be answered. Therefore, the Council set up a subcommittee, with United States Under Secretary of Agriculture McCormick as chairman, to consider what action should be taken on the mission report. After several inconclusive sessions the subcommittee established a working party composed of members from the United States, India, the United Kingdom, and Yugoslavia to work out a mutually acceptable line of action.

Several points of issue made mutual agreement difficult. One was that Yugoslavia was unwilling to accept a proposal to reduce its food deficit by slaughtering additional livestock and cutting slaughter weights further. It was reluctant to do so, because it felt such action would simply prolong the food shortage by reducing the amount of meat that it exports and therefore increase future import needs; Yugoslavia depends in part on meat exports to earn foreign exchange. In its position, Yugoslavia was supported by the FAO mission.

Another point of issue was that Yugoslavia was unwilling to reduce its imports of nonfood items in order to make foreign exchange available for purchasing food. It felt that in so doing the country's expenditures for defense and its supply of raw materials for industry would be curtailed. Its position was that these expenditures and supplies could not safely be reduced.

Finally, the working party and the subcommittee and the Council agreed that this aspect of the Yugoslavian problem was essentially one of balance of payments and that the Council was not technically competent to appraise or to act on it.

Therefore the Council instructed the Director-General of FAO to transmit a copy of the Council's report to the Secretary-General of the United Nations, in accordance with procedures adopted by

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the Economic and Social Council and by the last FAO Conference. The Council urged all member governments of FAO to consider any assistance they can give and to inform the Secretary-General or the Director-General of any action they take. The Council also asked the Director-General to continue to assist the Yugoslavian Government as much as he can.

Emergency Food Reserve

The discussion of the food shortage in Yugoslavia had an important bearing on that of the emergency food reserve. It emphasized many of the difficult questions that the proposed reserve raises. For example, there is the ever-present one of how to define a famine. Another, brought out clearly by the Yugoslavian case, is whether a country asking for famine relief should, before it is given aid, be required to use all its available foreign exchange by restricting imports of nonfood items.

The Council reviewed the report of the working party that met in September to consider the practicability of the various ways of setting up an emergency reserve. This group had concluded that a physical reserve of food stocks was impracticable, whether owned nationally or internationally, and that a financial reserve might be practicable, if governments wanted to set one up.

In the discussion on a famine reserve at the Council, three basic points of view were expressed: One favored setting up international machinery for providing assistance, of which a famine reserve would be part; this viewpoint was advanced most positively by India and Yugoslavia. Another opposed the idea of international machinery involving advance commitments, preferring the ad hoc approach of dealing with each famine as it arises by appealing to the generosity of governments; this viewpoint was advanced primarily by the United Kingdom, with some support from Australia; the United Kingdom delegation made the point that it would be wrong to tie up money that might be used currently to help increase food production. The third point of view neither favored nor opposed a specific plan; the group having this viewpoint felt, however, that more study is needed, particularly of the problems of a financial reserve, before any decision can be reached; the majority of the delegates, including the United States, expressed this point of view.

The Brazilian delegate pointed out that, although starvation was dramatic, chronic malnutrition was

no less urgent; the real solution was to provide food for all. He said that there might be both food surpluses and undernourishment in some countries, and that means of providing effective demand and proper distribution were needed.

The French delegate suggested that a study group, composed primarily of financial experts, be set up to consider the problems involved in an international fund for famine aid. He felt that the group should also examine the possibility of combining the plans for an international fund and for nationally held stocks, and should take up any other problems that they felt should be dealt with.

The Council approved this proposal, and set up a working party of seven members, one to be appointed by each of the following governments: Argentina, Australia, France, India, the Netherlands, the United Kingdom, and the United States. The people appointed are to be technically competent in financial problems and in procurement and marketing; they are to serve as individuals, but should be able to reflect the policies of their governments. The working party is to report to Council members by March 1953, so that the next session of the Council can decide what action to take or to recommend to the next session of the Conference.

In the discussion on famine reserves, the Council emphasized the need for countries to better equip themselves to deal with food shortages by studying the probable incidence of crop failures and the transportation and storage facilities that are needed. Governments were urged to ask for technical assistance on these problems.

Other Council Actions

In addition to the famine problems, the Council examined many of FAO's day-to-day operations such as those on the control of locusts and hoof-and-mouth disease, progress of the technical assistance program, work on improving national statistics, and a number of constitutional and administrative problems.

These are not the kinds of issues that make headlines, but each required the same advance preparation and careful thought and discussion, both on the part of the FAO staff and of the member government, as did the issues that attracted widest attention. Each is an integral part of the operation of an international organization and a part of the total effort of FAO to create better production, distribution, and consumption of food and agricultural products for the benefit of the people of the world.

Edible Birds'-Nests in Thailand

Birds'-nest soup, although an odd culinary item in the Western World, has long been considered a great delicacy in the Orient. There, the nests of certain birds—various swifts of the genus *Collocalia*—not only are considered edible but form the basis of a rather important occupation.

In Thailand the nests are found in caverns on several islands as well as in two houses in the town of Pak Panang, to which the swifts came only a few years ago.

In the caverns the swifts build their nests in almost complete darkness on smooth sections of the walls, where they are safe from all enemies except man. The birds have powerful salivary glands from which a gelatinous substance is ejected in thread-like strands, which harden when dry. The nests are made from these strands and, when completed, look as though they had been woven of heavy threads of a translucent material resembling certain plastic fibers. Under ordinary circumstances the birds add no other material to the nest.

The nests are collected three times a year by two concessionaires, who pay large premiums for their contracts. Between collection periods, guards remain on the islands to prevent poaching. The nests are so valuable (even medium-grade nests are worth more than their weight in silver) that every precaution is taken to prevent their being stolen.

Collecting the birds'-nests is a hazardous, skilled occupation. The caves are enormous, and the collectors work several hundred feet above the floor of the cave, either perched on top of long bamboo poles, which are used as ladders, or crouched in baskets that have been lowered through crevices in the mountains. By torchlight the collectors pry the nests from the walls of the cavern with a flat-bladed knife attached to the end of a bamboo rod.

Sometimes the nests are placed in bags as they are gathered, but often they are allowed to fall to the floor below, where they are picked up by the collector's assistants.

Birds'-nests are valued according to lightness of color, firmness of texture, absence of foreign materials, and perfection of form.

The nests are brought from the islands in large boxes, and are then sorted and graded. Such foreign materials as bits of feathers are removed from the nests, which are further cleaned by brushing. Rough edges, particularly the heavy portion by which the

nest was attached to the wall, are removed with a sharp knife. Finally, the nests are packaged and ready for sale to epicures of Oriental foods.

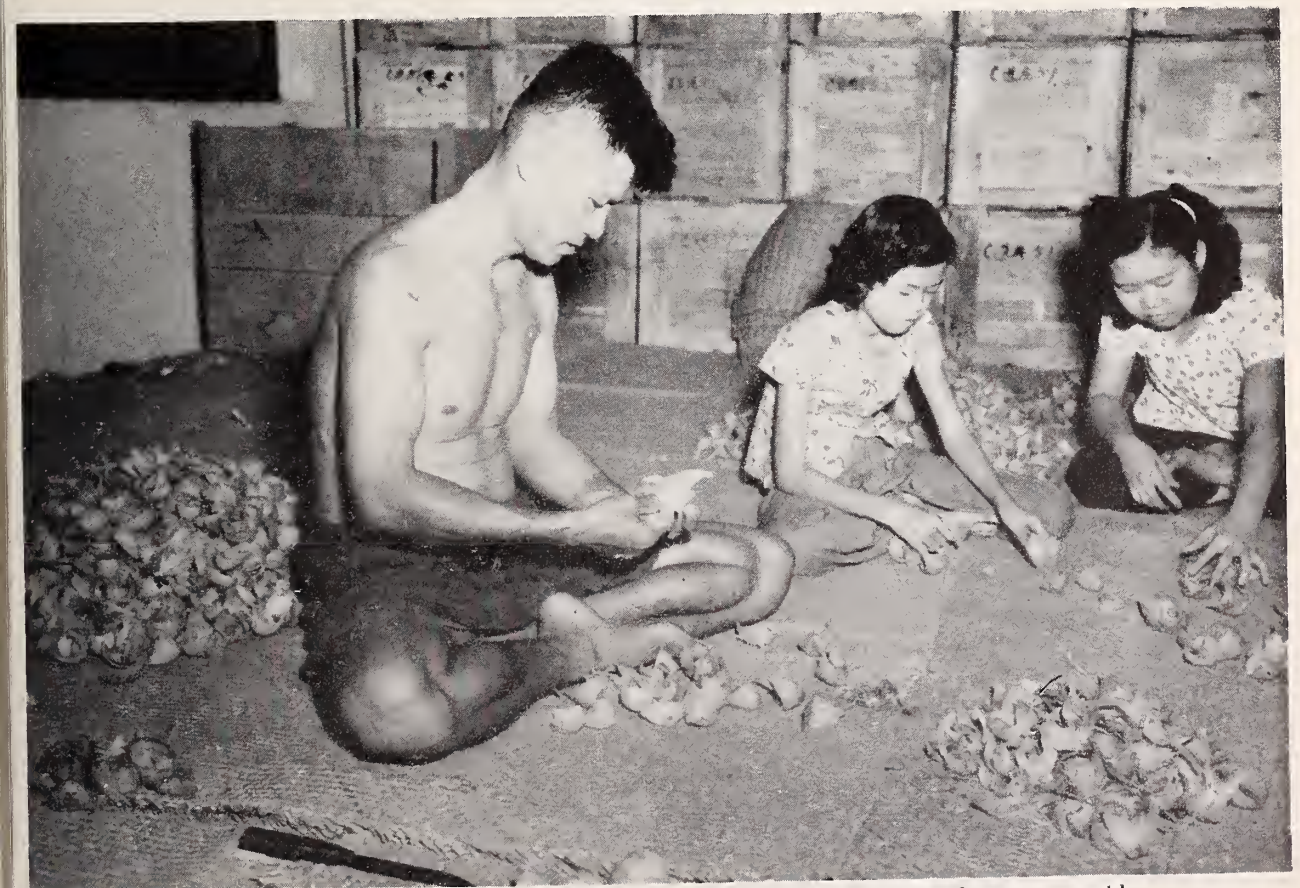
The houses in Pak Panang in which the swifts established themselves are thought to be highly favored. The owner of one of the houses, in recognition of his good luck, gives to charity all money received from the sale of the nests built in his house.



Edible birds'-nests are found in island caverns in Thailand. Gathering them is a skilled, hazardous occupation, for collectors often work hundreds of feet above the cavern floor, perched on bamboo "ladders."



A collector's assistant gathers nests that have been pried from the cavern wall high above. Tough and resilient, the nests fall without breaking.



In Bangkok the birds'-nests are sorted and cleaned. In this shop, only birds'-nests are sold.

U.S. Farm Exports Reflect More Ample World Supplies

by ALEX D. ANGELIDIS



The substantially smaller volume of United States agricultural exports in the July-September 1952 quarter as compared with exports in the like quarter of earlier postwar years may reflect an important change in the world supply situation. With more ample supplies of a number of agricultural products available abroad, many countries buying our farm products have become less dependent on the United States and have been encouraged to shift to other sources of supply for large parts of their needs. These shifts are of special significance to United States agriculture owing to a continued shortage of dollars abroad, which has restricted the ability of our foreign customers to pay for all the things that they would like to buy here.

There are reasons to believe that the 27-percent decline in the physical volume of United States farm exports from the July-September 1951 quarter to the like quarter of 1952 was more than a "correction" from the high levels attained after the outbreak of the Korean war in June 1950. It is worth noting that the volume of our agricultural exports increased to the postwar peak in the October-December 1951 quarter and then declined during the subsequent three quarters to the lowest postwar point in the July-September 1952 period. Although trade volume in this quarter was at the seasonal low point and averaged lower than the last quarter of 1951-52, the monthly trend within the quarter was moving upward more than seasonally, paralleling the 1951-52 rate. This trend continued into October, the latest month for which data are available now.

It will be recalled that, upon the outbreak of the Korean war, the threat of a general all-out conflict sent the trading nations of the world into a spree of foreign purchasing in order to build up food reserves, replenish raw-material inventories, and stockpile essential commodities in expectation of possible shortages. The availability of adequate supplies of agricultural commodities at attractive

prices in the United States encouraged many countries to increase purchases here very substantially. With their improved dollar position resulting in part from the currency devaluations of late 1949, in part from the higher prices being received from the substantial raw-material sales in the United States in late 1950 and early 1951, and in part from financing provided by our foreign economic aid programs, many countries were able to pay for their very large purchases of our products. Food shortages in India and Yugoslavia, both hit severely by drought, and an uncertain rice supply situation in the Far East also were important factors contributing to the larger foreign purchases of our agricultural products in this period. Under these conditions, our farm exports quickly rose and reached their highest postwar point in the October-December 1951 period.

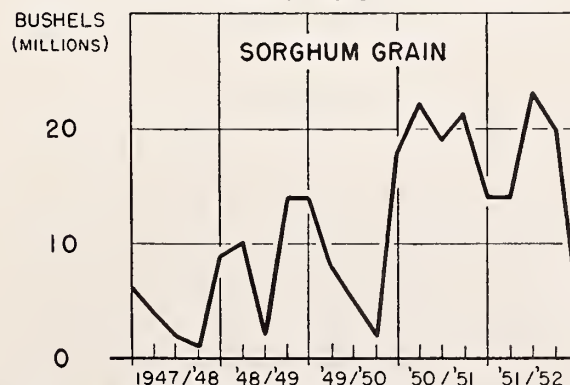
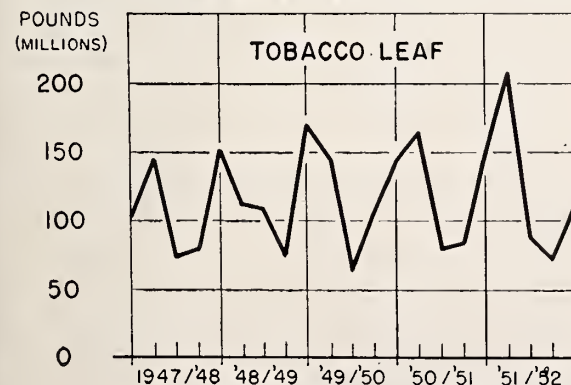
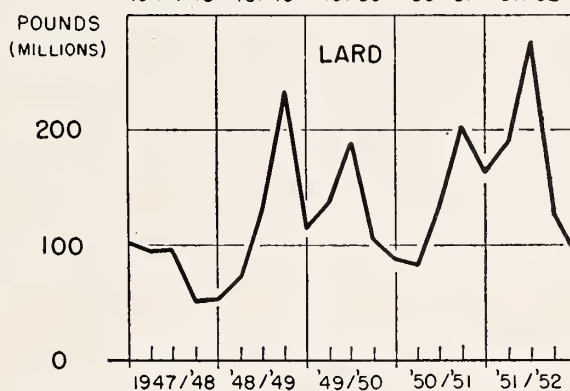
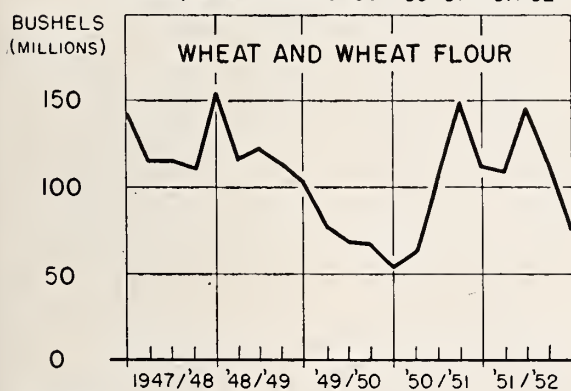
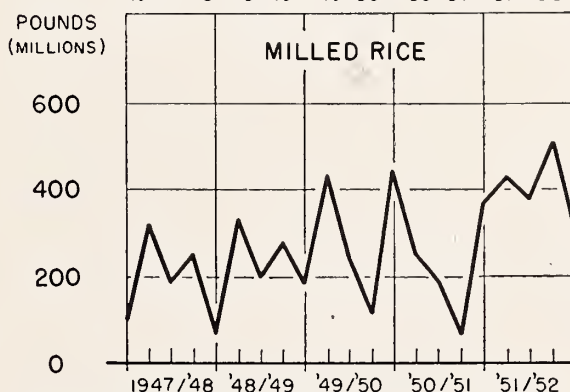
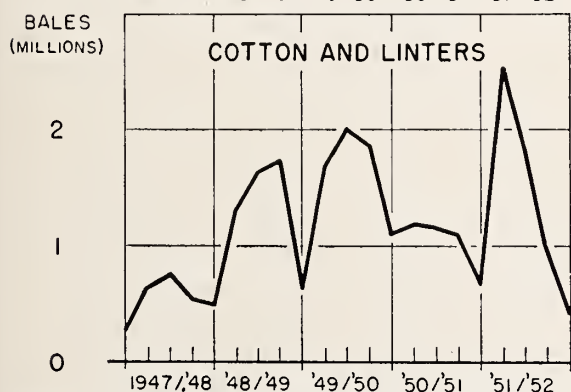
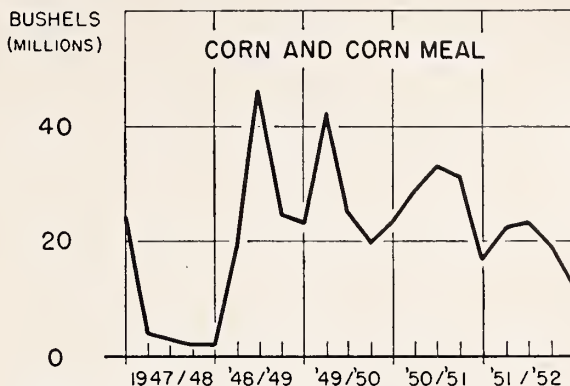
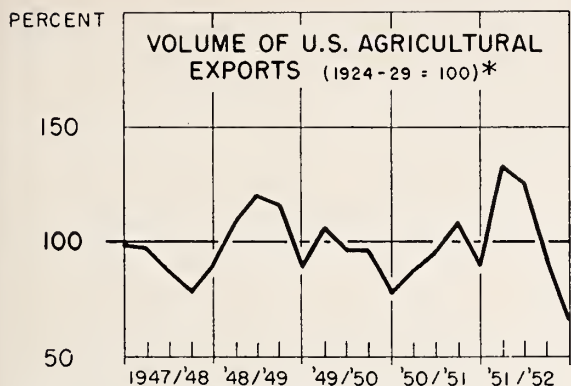
The three quarters that followed were marked by a sharp and substantial decline in United States agricultural exports, which reached their lowest postwar level in the July-September 1952 period. Supply situations that were considered tight in many areas became increasingly favorable. Continued recovery in world production from the destruction of World War II was making larger quantities of agricultural products available both in importing and in exporting countries. In addition to expansion already achieved, forecasts for the current year pointed to a record world output of bread grains, rice, and fats and oils and to a near-record world output of cotton and corn. Favorable weather resulted in higher yields, and more acres were under cultivation.

It was also evident that the Korean war was not spreading. Buyers of United States agricultural commodities abroad postponed new purchases except as needed on a "hand to mouth" basis and drew upon accumulated stocks and inventories. As other

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U.S. EXPORTS OF SELECTED[▲] AGRICULTURAL COMMODITIES

QUARTERLY VOLUME, JULY - SEPT. 1947 - 1952



[▲]THESE COMMODITIES ACCOUNTED FOR 78% OF 1951-52 AGRICULTURAL EXPORT VALUE.

*UNADJUSTED FOR SEASONAL VARIATIONS.

U. S. D. A.

OFAR NEG. 1964

sources of supply appeared in world markets, some countries shifted their purchasing to them. Their ability to "shop around" emphasizes the importance of the United States as a residual source for many importing countries when supplies are available elsewhere for currencies other than dollars.

Although the financial ability of foreign countries to pay for United States products was materially improved by their increased dollar earnings (as reflected in increased United States imports of goods and services, foreign military spending, and foreign investments) particularly at a time when our foreign economic aid was diminishing in size, the dollars "earned" by these countries were not everywhere sufficient to meet all needs. Some countries decided to spend part of their "earned" dollars on military end-use goods. Others necessarily decided to save part of them by rebuilding depleted foreign exchange reserves. The dollar crisis that developed early in 1952 caused some countries, particularly Britain, France, and Brazil, to tighten their restrictions on dollar imports. Dollar-short importing countries gave increased preference to soft-currency sources of supply.

With a larger number of "earned" dollars in the hands of our foreign customers, it was becoming increasingly evident that the future level of United States agricultural exports would depend primarily upon our ability to sell abroad at attractive prices. Whereas in 1948-49 about two-thirds of the value of our agricultural exports was financed by various foreign economic aid funds, by fiscal year 1951-52 only about one-fifth was so financed. The remainder of our agricultural exports, representing a value of about \$3.2 billion, was paid for with "earned" dollars that foreign countries were free to spend as they wished.

Most of the principal agricultural products sold abroad by the United States were affected by the more ample supplies available elsewhere, particularly cotton and linters, wheat and wheat flour, corn and cornmeal, and lard. In the case of sorghum grain, the drop in exports reflected the limited domestic supply available for export. With respect to tobacco, the foremost problem facing foreign buyers is the lack of enough dollars. In the case of rice, which is under export control and allocation, foreign demand is stronger than it was in 1951-52, and our exports in 1952-53 are expected to exceed those of 1951-52.

The accompanying chart shows recent trends in

the quarterly total volume of United States agricultural exports and comparable trends in the export volume of the top seven products, accounting for close to four-fifths of the 1951-52 agricultural export value. Factors underlying the more important of the trends are discussed below.

Cotton

The 1951-52 cotton export movement was slow in starting because the 1950-51 export controls were not removed until August 1951 and supplies remained scarce until the new crop became available. Export sales, however, were heavy early in the season following a year of scarce supplies available to importing countries. They were stimulated also by the fact that prices of American cotton were 20 to 25 cents a pound lower at that time than those of similar foreign growths, stocks of which mostly had been depleted in 1950-51. As prices of United States cotton approached support levels largely as the result of the anticipated large crop, importing countries bought heavily to replenish stocks and to meet current mill requirements. The need for stock replenishment was a reflection of smaller United States exports in the 1950-51 season due to the short crop and subsequent export controls. Export-Import Bank loans also stimulated cotton export sales. Early in calendar year 1952, however, there developed a downward trend in foreign cotton prices that encouraged buyers to operate out of stocks and to buy as little as possible for current needs. This price decline came after the harvest of large 1951-52 crops of foreign cotton and when mill operations in importing countries were at a low level as the result of a world-wide recession in the cotton textile trade. While the market picture became brighter in mid-1952 with an upturn in mill consumption in many importing countries, foreign supplying countries possessed ample supplies of cotton to meet increased demand and were offering them at prices more competitive with United States cotton prices than a year earlier. Exports of cotton and linters from the United States in the July-September 1952 quarter were 36 percent below the volume in the like quarter of 1951.

Wheat

Wheat exports in the July-September 1950 quarter had gone down for the sixth consecutive quarter, reflecting mainly smaller foreign aid exports due to improved food supplies abroad. The situation quickly changed, however, as the course of events

once again began to favor exports of United States wheat. Its price in the world market became more attractive at the maximum level under the International Wheat Agreement, which was approved in 1949. Spurred on by the Korean war, many countries undertook to build up grain reserves in expectation of possible shortages. Harvesting and marketing difficulties limited Canadian exports; crop failures in Southern Hemisphere producing countries (Australia and Argentina) sharply reduced their exports. Large emergency shipments were made to India and Yugoslavia, where food shortages developed as the result of drought. By the April-June 1952 quarter, however, in the light of very good production and an improved stock position in Western European deficit areas, an improved stock position in India, and larger exports from Canada's record wheat crop, our exports declined and in the July-September 1952 quarter were one-third below a year earlier.

Tobacco Leaf

United States tobacco leaf exports in the post-war period have been limited mostly by dollar import restrictions by foreign countries. However, partly because of preferences developed for United States leaf and partly because of taxes collected abroad on tobacco products, our exports have been well maintained. The high point reached in the October-December 1951 quarter was largely the result of very substantial shipments to the United Kingdom, where stocks of United States leaf were approaching the minimum considered necessary for the maintenance of consumption at or near desired levels. The United Kingdom has indicated that it might not be able to spend as much for 1952 tobacco as it did for 1951 leaf. The reduction in exports to that country is expected to be offset somewhat by the prospect of larger sales to Western Germany. Total leaf exports from the United States in the July-September 1952 quarter were about one-fourth less than a year earlier.

Corn and Sorghum Grain

The very favorable United States corn exports in 1950-51 reflected the larger domestic supplies available, a deficit in Argentina due to crop failures, a heavy demand in Western Europe due to expanding livestock production, and stockpiling abroad. The lower level of exports in 1951-52 was due mainly to a tightened feed supply situation and higher prices in this country. Many countries that

normally would have bought corn found it necessary to buy sorghum grain. Exports of corn in 1952-53 are expected to be above 1951-52 levels due partly to a larger crop of good quality corn and partly to some substitution of corn for sorghum grain. However, in the July-September 1952 quarter, they were 35 percent smaller than a year earlier.

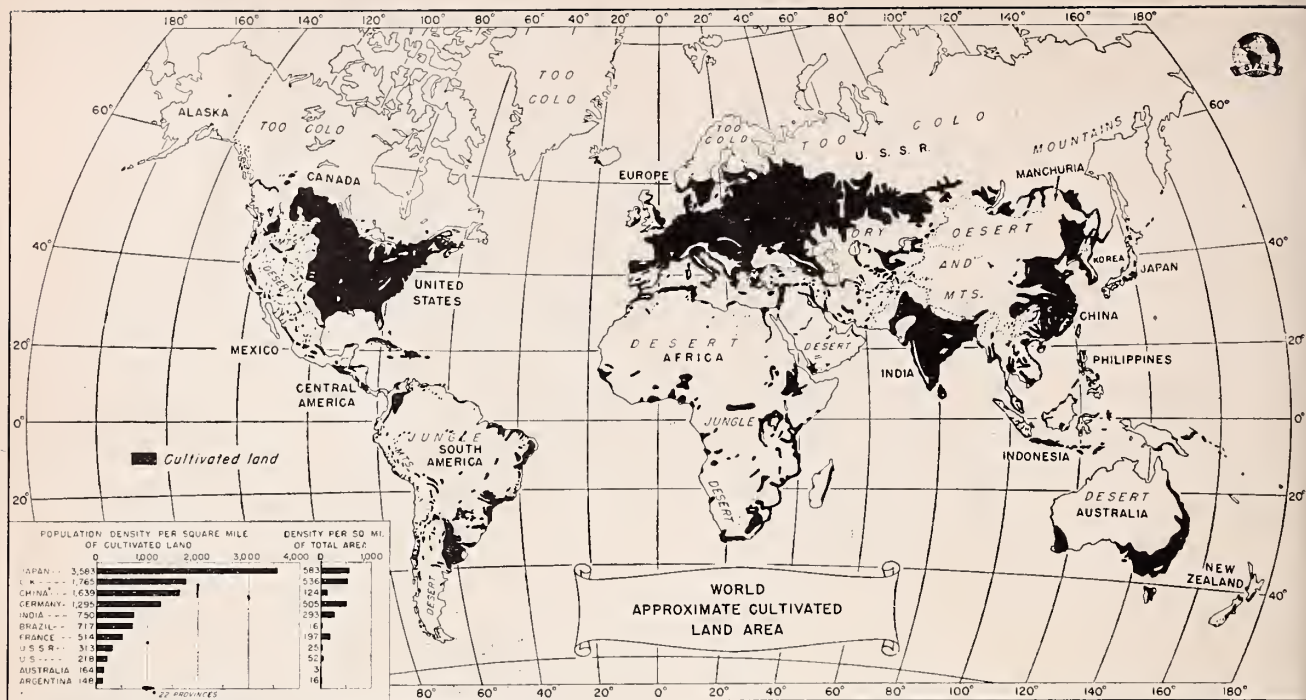
Exports of sorghum grain were already at exceptionally high levels upon the outbreak of the Korean war. Sorghum grain had become important because of its cheapness relative to corn and other grains as feed and because of increased Asiatic demand for it as human food. Although considered a feed grain here, sorghum grain has been used as human food in India and elsewhere. The fact that the 1952 sorghum crop is the smallest in about 12 years primarily accounts for the reduction in exports, which were about 70 percent smaller in the July-September 1952 quarter than a year earlier.

Rice

There was little seasonal drop in our rice exports during 1951-52 owing to the increased demand in the Far East (mainly in Indonesia, Japan, Korea and Ceylon) arising out of several developments there. In general, these developments were: price increases resulting from a temporary withholding of rice from the market, smaller stocks in importing countries, increased economic activity in some areas, military requirements for civilian feeding in Korea, and population growth. Foreign demand for United States rice in 1952-53 is stronger than it was in 1951-52, but United States exports are being controlled in order to prevent an excessive drain on domestic supplies and to assure individual importing countries an appropriate share of our exports.

Lard

The relatively high level of our lard exports reached in the January-March 1952 quarter reflected a part of the unusually large purchases by the United Kingdom in 1951-52. Other factors underlying the increased exports were the large supplies in the United States and larger shipments to Yugoslavia. By the July-September 1952 quarter, just about all of the gain in our exports during the two preceding years was lost. Increased supplies of African peanuts available to the United Kingdom was an important factor in reducing its need for our lard. Exports are expected to remain below 1952-53 unless the United Kingdom changes its position with respect to dollar imports of lard.



U. S. DEPARTMENT OF AGRICULTURE

NEG. 1958 OFFICE OF FOREIGN AGRICULTURAL RELATIONS

Less than 8 percent of the total land surface of the globe is actually cultivated. About two-thirds of this land lies in the Temperate Zone; the remainder is in the Tropics. If the land that various authorities say could probably be farmed were added to the present cultivated land area, nearly 20 percent of the world's land would be in crops, and nearly half of this cropland would be in the Tropical Zone. At the present time, most of the population of the world is concentrated on this 20 percent of the land area. This map shows that enormous areas in the world are not cultivated because they are jungles or mountains or are extremely cold or dry. It also affords a kind of measure by which the agricultural productive capacity of the various nations can be compared. The measure is rough, however, since the map does not show crop yields, potential productivity, or the pattern and intensity of agricultural land use.

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON 25, D. C.
OFFICIAL BUSINESS

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(GPO)

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